

REMARKS

Applicants appreciate the Examiner's thorough examination of the subject application and request reconsideration of the subject application based on the foregoing amendments and the following remarks.

Claims 1-115 are pending in the subject application. Claims 14-115 are withdrawn from consideration as the result of an Examiner's earlier restriction/ species requirement. In view of the Examiner's earlier restriction requirement, Applicants reserve the right to present the above-identified withdrawn claims in a divisional application.

Claims 1-13 stand rejected under 35 U.S.C. §102 and/ or 35 U.S.C. §103.

Claim 1 was amended for clarity.

Claims 117-121 were added to more distinctly claim aspects/ embodiments of the present invention.

The specification was amended so as to resolve some grammatical concerns on pages 2 and 62-63 of the subject application. The amendments to the specification do not introduce new matter because they are editorial in nature.

35 U.S.C. §102 REJECTIONS

The Examiner rejected claims 1-7 under 35 U.S.C. §102(e) as being anticipated by Kobayashi et al. [USP 5,973,661; "Kobayashi"]. Applicants respectfully traverse as discussed below.

Applicants claim, claim 1, an image display device including a pixel array, a data signal driving circuit, a scan signal line driving circuit, a timing circuit, and a video processing circuit. The pixel array is constituted by a plurality of pixels for displaying an image and the data signal line drive circuit supplies a video signal to the pixel array and the scan signal line drive circuit controls writing of the video signal to the plurality of pixels. The timing circuit supplies a timing signal to the data signal line drive circuit and the scan signal line drive circuit and the video signal processing circuit supplies the video signal to the data signal line drive circuit. Further, a part or entirety of either or both of the data signal line drive circuit and the scan signal line drive circuit is provided in plurality so as to realize mutually different display configurations.

As provided in the subject application, the provision of the parts or entireties of the data signal line drive circuit are capable of realizing mutually different configurations that enables video displays in different formats. In other words, the parts or entireties of the data signal line drive circuit are provided in accordance with a plurality of display formats and selectively operated depending on the need of the user, kind of input signal, and environmental conditions, enabling a video display in a format that is most suited to a purpose.

In contrast to the present invention, Kobayashi describes and teaches an image display device including an image processing circuit 30 that embodies or incorporates an inversion circuit 40, a specialized phase expansion circuit 50, a rotation circuit and a control circuit 35 to control processing therein. The image processing circuit is configured so that six expanded image pixel signals are outputted from the output terminal (out1-out6) that are connected to respective image data lines 100-1 to 100-6 and the sampling switches. See col. 7, lines 15-23, col. 7, line 64- col. 8,

line 10. Using well known techniques the sampling switches are controlled so that the pre-processed image signals are outputted via the column lines 113 to the respective pixels of the pixel array.

Notwithstanding the foregoing remarks, and in the interests of advancing prosecution; Applicants amended claim 1 for clarity. More specifically, claim 1 was amended to make clear that a portion comparable to a substantial “drive circuit” is provided in plurality in the present invention. It appears that the rejection might be based on the sampling switches 112-1, ... 112-8 or so in Kobayashi (*e.g.*, see Fig. 1 thereof) being provided in plurality in the data signal line drive circuit. The foregoing described amendment makes clear that it is not signal lines nor sampling switches but rather, as indicated above, in the present invention it is a portion comparable to a substantial drive circuit that are provided in plurality.

Thus, and in contrast to the present invention, Kobayashi does not disclose as is claimed by Applicants that a part or entirety of either or both of the data signal line drive circuit and the scan signal line drive circuit is provided in plurality so as to realize mutually different display configurations. Rather in Kobayashi, the display configuration is static and unchanging. All that Kobayashi discloses and teaches is pre-processing of the video signals so as to yield expanded image pixel signals.

It is respectfully submitted that at least for the foregoing reasons, each of claims 2-7 also are distinguishable from Kobayashi. This shall not be construed as being an admission that each of claims 2-7 is not separately patentable.

As provided in MPEP-2131, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegel Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Or stated another way, “The identical invention must be shown in as complete detail as is contained in the ... claims. *Richardson v Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ 2d. 1913, 1920 (Fed. Cir. 1989). Although identify of terminology is not required, the elements must be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990). It is clear from the foregoing remarks that the above identified claims are not anticipated by the cited reference.

It is respectfully submitted that for the foregoing reasons, claims 1-7 are patentable over the cited reference and satisfy the requirements of 35 U.S.C. §102(d). As such, these claims, including the claims dependent therefrom are allowable.

35 U.S.C. §103 REJECTIONS

Claims 8-13 stand rejected under 35 U.S.C. §103 as being unpatentable over the cited art for the reasons provided on pages 4-9 of the above-referenced Office Action. Specifically, claim 8 stands rejected as being unpatentable over Kobayashi and further in view Tsuchida et al. [USP 6,232,938; “Tsuchida”]; claims 9-10 stand rejected as being unpatentable over Kobayashi and Tsuchida and further in view Kanno et al. [USP 5,898,417; “Kanno”]; claim 11 stands rejected as being unpatentable over Kobayashi and further in view Taguchi et al. [USP 6,181,317; “Taguchi”]; claim 12 stands rejected as being unpatentable over Kobayashi and further in view Sohawa et al.

[USP 6,353,460; "Sokawa"]; and claim 13 stands rejected as being unpatentable over Kobayashi and further in view Imamura [USP 6,232,949]. Applicants respectfully traverse as discussed below.

Each of claims 8-13 depends directly or ultimately from claim 1. As indicated in the discussion regarding claims 1-7, Kobayashi does not disclose the image display device as set forth in claim 1. Applicants also respectfully submit that Kobayashi also does not teach or suggest the image display device of claim 1. Further, Applicants respectfully submit that Kobayashi does not teach, suggest nor offer any motivation for modifying the image display device disclosed in Kobayashi so as to yield the image display device of claim 1. Moreover, Applicants submit that it is clear from the foregoing remarks regarding Kobayashi that modifying the image display device of Kobayashi so as to yield the image display device of claim 1, necessarily means that the operation of the resultant display device would be necessarily different from the way in which the display device in Kobayashi was intended to operate. Thus, Applicants respectfully submit that at least because of this reason, each of claims 8-13 is distinguishable from the respective combination of references.

CLAIM 8

As to claim 8, the secondary reference Tsuchida, this reference is being utilized for an asserted limited teaching of the added features and limitations of claim 8. As such, it necessarily follows, that the above-described shortcomings as to the principal reference Kobayashi are not overcome.

As to claim 8, this claim adds the further limitations that at least one of the parts and entireties of the data signal line drive circuit writes image data overlapping an image written by another part or entirety of the data signal line drive circuit in one frame period. In the language cited to in Tsuchida, there is described an image display device comprised of two or more liquid crystal cells where the second liquid crystal cell physically overlaps the first liquid crystal cell. In other words, Tsuchida is basically describing a display device having two or more pixel arrays. Such a disclosure hardly can be said to disclose, teach or suggest a display device as is claimed by Applicants, in which one or the parts or the entireties of the data signal line circuit writes image data that overlaps an image that is written by another part or entirety of the data signal line drive circuit, where the pixel array in which the image data is being written to is the same pixel array in both write operations.

CLAIMS 9-10

As to claims 9-10, the tertiary reference, Kanno is being utilized for an asserted limited teaching of the added features and limitations of claims 9 and 10 not found in either of Kobayashi and Tsuchida. As such, it necessarily follows, that the above-described shortcomings as to the principal reference Kobayashi are not overcome as well as the shortcomings noted above regarding Tsuchida as to claim 8.

As to the tertiary reference the language being referred to in Kanno describes that the later half period 1H of the 2H period overlaps the selection period of the output channel which is selected by the next address data. The foregoing hardly can be said to disclose, teach or suggest a

display device as is claimed by Applicants (claim 8), in which one of the parts or the entireties of the data signal line circuit writes image data that overlaps an image that is written by another part or entirety of the data signal line drive circuit, where the pixel array in which the image data is being written to is the same pixel array in both write operations. More particularly carrying out such writing of the overlapping image data through one or more horizontal scan periods (claim 9) or only in a part of one or more entire horizontal scan periods (claim 10).

CLAIM-11

As to claim 11, the secondary reference, Taguchi is is being utilized for an asserted limited teaching of the added features and limitations of claim 11. As such, it necessarily follows, that the above-described shortcomings as to the principal reference Kobayashi are not overcome.

As to claim 11, this claim adds the further limitations that a part or entirety of the data signal line drive circuit is provided in plurality and at least one of the parts and entireties of the data signal line drive circuit writes image data in a blanking period of each horizontal scan period.

It first should be noted that the Office Action states that Kobayashi does not teach inter alia that a part or entirety of the data signal line drive circuit is provided in plurality. It should be noted that this assertion, is inconsistent with earlier assertions regarding the rejection of claims 1-7 and thus, amounts to an admission that claims 1-7 are not anticipated by Kobayashi.

As to Taguchi, figure 59 thereof illustrates a display device including two horizontal scan line or gate drivers 731, 732 that are located at opposite ends of the horizontal scan lines. It is clear

from the discussion in cols 18-19 of Taguchi, however, that the two gate drivers are not operated so as to realize mutually different display configurations. Rather, the discussion in Taguchi is clearly directed to how image data is being written to the pixel array.

CLAIM-12

As to claim 12, the secondary reference, Sokawa is is being utilized for an asserted limited teaching of the added features and limitations of claim 12. As such, it necessarily follows, that the above-described shortcomings as to the principal reference Kobayashi are not overcome.

It first should be noted that the Office Action states that Kobayashi does not teach inter alia that a part or entirety of the data signal line drive circuit is provided in plurality. It should be noted that this assertion, is inconsistent with earlier assertions regarding the rejection of claims 1-7 and thus, amounts to an admission that claims 1-7 are not anticipated by Kobayashi.

Applicants also respectfully disagree with the characterization of what is asserted as being disclosed and taught in Sokawa. As indicated in the discussion above regarding claim 1, for the image display device of the present invention, the part or entirety of the data signal line drive circuit is provided in plurality so as to realize mutually different display configurations. It is clear from col. 11, lines 4-8 thereof that the display device 1050 is capable of displaying a video signal having a predetermined display format. The discussion in Sokawa referred to in the Office Action, when read in light of the discussion in cols 11-12 thereof, make clear that the image processor converts the format of the video signals into the predetermined display format of the display device. As such, the conversion process described and taught in Sokawa is accomplished external to the circuitry of

the display device. It also appears that Sokawa nowhere describes the circuitry involved with the operation of the display device.

Thus, it can hardly be said that Sokawa disclose, teaches or suggest a display device in which the part or entirety of the data signal line drive circuit is provided in plurality, in particular so as to realize mutually different display configurations for such a display device. It also can hardly be said that Sokawa also discloses, teaches or suggests, as is set forth in claim 12. that at least one of the parts and entireties of the data signal line drive circuit writes image data with a predetermined delay from another part or entirety of the data signal line drive circuit.

CLAIM-13

As to claim 13, the secondary reference, Imamura is is being utilized for an asserted limited teaching of the added features and limitations of claim 13. As such, it necessarily follows, that the above-described shortcomings as to the principal reference Kobayashi are not overcome.

Imamura merely teaches the technique of providing driver circuits or drivers at both ends of the scan lines so the same voltage is applied simultaneously to both ends so as to drive the scan line. As such, it can hardly be said that Imamura discloses, teaches or suggests the image display device of the present invention in which a part or entirety of either or both of the data signal line drive circuit and the scan signal line drive circuit is provided in plurality so as to realize mutually different display configurations.

As provided in MPEP 2143.01, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F. 2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F. 2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). As provided above, the references cited, alone or in combination, include no such teaching, suggestion or motivation.

Furthermore, and as provided in MPEP 2143.02, a prior art reference can be combined or modified to reject claims as obvious as long as there is a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Additionally, it also has been held that if the proposed modification or combination would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. Further, and as provided in MPEP-2143, the teaching or suggestion to make the claimed combination and the reasonable suggestion of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). As can be seen from the forgoing discussion regarding the disclosures of the cited references, there is no reasonable expectation of success provided in the reference(s). Also, it is clear from the foregoing discussion that the modification suggested by the Examiner would change the principle of operation of the device disclosed in Kobayashi.

As the Federal circuit has stated, "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art

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suggested the desirability of the modification.” *In re Fritch*, 972 F.2d 1260,1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). Obviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor. *Para-Ordance Mfg. v. SGS Importers Int’l, Inc.*, 73 F.2d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995).

It is respectfully submitted that for the foregoing reasons, claims 8-13 are patentable over the cited reference(s) and thus, satisfy the requirements of 35 U.S.C. §103. As such, these claims are allowable.

CLAIMS 117-121

As indicated above, claims 117-121 were added to more distinctly claim embodiments/aspects of the present invention. These claims are clearly supported by the originally filed disclosure, including the originally filed claims. It also is respectfully submitted that these added claims are patentable over the cited prior art on which the above-described rejection(s) are based.

It is respectfully submitted that the subject application is in a condition for allowance. Early and favorable action is requested.

Applicants believe that additional fees are not required for consideration of the within Response. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed

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for any excess fee paid, the Commissioner is hereby authorized and requested to charge Deposit

Account No. **04-1105**.

Respectfully submitted,
Edwards & Angell, LLP

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